

Compactness of Hankel operators with continuous symbols on convex domains

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Let Ω be a bounded convex domain in \mathbb{C}^n , $n \geq 2$, $1 \leq q \leq (n - 1)$, and $\phi \in C(\overline{\Omega})$. If the Hankel operator H_ϕ^{q-1} on $(0, q - 1)$ -forms with symbol ϕ is compact, then ϕ is holomorphic along q -dimensional analytic (actually, affine) varieties in the boundary. We also prove a partial converse: if the boundary contains only ‘finitely many’ varieties, $1 \leq q \leq n$, and $\phi \in C(\overline{\Omega})$ is analytic along the ones of dimension q (or higher), then H_ϕ^{q-1} is compact. This is joint work with Mehmet Çelik and Sönmez Şahutoğlu.
